

REMARKS

Claims 17-35 are pending, of which claims 17, 27 and 32 are independent.

In the Office Action mailed September 29, 2008, the Examiner rejected claims 17-35 under § 103 as unpatenable for obviousness based on a single prior art reference, Rune et al. US PG Pub 2001/0029166 ("Rune").

Independent claims 17 and 27 express Applicant's invention in terms of a multiphase protocol for determining a central coordinator node for a communication network, wherein discrete listening, discovery, election and confirm phases, each involving specialized tasks, are performed sequentially, and wherein the discovery and election phases are conducted for a predetermined duration immediately after the preceding phase. The approach recited in these claims facilitates an arbitrary number of nodes that are participating in a protocol by which a central coordinator node is selected in conducting and completing the discovery and election phases of the protocol at approximately the same time, that is, nearly simultaneously. Substantially contemporaneous discovery and election by all participating nodes results in the nodes developing a common understanding of the network topology and promotes consensus among the nodes about which node is the optimal choice to serve as the central coordinator. A third independent claim, claim 32, recites listening, discovery and election phase timers that enforce phase transitions and offer similar advantages to those discussed above in relation to independent claims 17 and 27.

Applicant respectfully submits that the position taken by the Examiner in the Office Action that Rune provides a suggestion to modify its teachings to realize the claimed invention is in error, and respectfully requests reconsideration, based on the following considerations.

THERE IS NO SUGGESTION TO MODIFY RUNE TO MAKE THE INVENTION AS CLAIMED; THE INQUIRY PHASE IN RUNE RELIED ON BY THE EXAMINER FOR THE SUGGESTION TEACHES AWAY FROM THE INVENTION AS CLAIMED SINCE THE INQUIRY PHASE IS OF INDEFINITE DURATION

It is settled that, in appropriate circumstances, a single prior art reference can render a claim obvious. However, there must be a showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention in order to support the obviousness conclusion. *SIBIA Neurosciences, Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000).

Here, there is no suggestion to modify the teachings of Rune to make the invention as claimed, which is required in order to support the Examiner's obviousness conclusion. This is because the INQUIRY phase discussed in Rune and relied on by the Examiner for the suggestion to modify Rune is of *indefinite* duration, whereas the claims recite discovery and election phases of *predetermined* duration and *phase time limits* that enforce phase transitions.

The Examiner has acknowledged that Rune is silent regarding the predetermined phase durations recited in independent claims 17 and 27 and the phase timers that enforce phase transitions recited in independent claim 32. With regard to claims 17 and 27, the Examiner has stated that "Rune is silent regarding a predetermined duration after a listening phase to conduct a discovery phase and a predetermined duration after a discovery phase to conduct an election phase." (Office Action, pp. 4-5, 8). With regard to claim 32, the Examiner has stated that "Rune is silent regarding a phase time limit after a listening phase to conduct a discovery phase and a phase time limit after a discovery phase to conduct an election phase." (Office Action, p.11).

Nonetheless, the Examiner has asserted that Rune's discussion of an INQUIRY phase at [0021] and in Steps 800-812 provides a suggestion to modify Rune to supply the missing predetermined phase durations and phase timers that enforce phase transitions. In particular, the Examiner cites Rune's statement at [0021] that "[a] unit adapted to communicate according to the Bluetooth specification and wanting to discover neighbouring units also adapted to communicate according to the Bluetooth specification, neighbouring meaning within radio coverage of the first unit, will repeatedly transmit according to well specified timing and frequency sequences, INQUIRY messages and listen for INQUIRY RESPONSE messages, which are optional," and Rune's description of INQUIRY phase message flows at Steps 800-812.

Applicant respectfully submits that the Examiner is mistaken in his assertion that Rune's INQUIRY phase discussion provides a suggestion to modify Rune to realize the claimed invention. The INQUIRY phase discussed in Rune does not provide such a suggestion because it is of *indefinite* duration. The INQUIRY phase in Rune therefore teaches away from the claims, which recite phases of *predetermined* duration and *phase time limits* that enforce phase transitions.

Referring to Rune, the INQUIRY phase at issue is "a neighbour discovery feature." [0020]. Rune mentions that the INQUIRY phase is important because "[w]ithout a neighbour discovery capability, a unit adapted to communicate according to the Bluetooth specification would not be capable of finding any other units adapted to communicate according to the Bluetooth specification with which it could communicate and consequently no ad hoc network could be formed." [0020]. Accordingly, the INQUIRY phase described in Rune by necessity continues until at least one unit suitable unit to form an ad hoc network is found, and is therefore of indefinite duration. Only after at least one suitable unit form an ad hoc network is found can the INQUIRY phase end and the PAGE phase, in which an actual connection is established, begin. See [0024].

Additional confirmation that Rune's INQUIRY phase is of indefinite duration is found at [0021], which the Examiner has erroneously cited in support of the alleged suggestion to modify. Rune describes at [0021] how "a unit wanting to discover neighbouring units ... will *repeatedly* transmit according to well-specified timing and frequency sequences, INQUIRY messages and listen for INQUIRY RESPONSE messages" (emphasis added). Later, Rune indicates at [0129] that "[t]he procedure starts in a block 800 where the first unit sends an INQUIRY message or *several such messages*." (emphasis added). The reason that Rune indicates that a unit "repeatedly" transmits INQUIRY messages or transmits "an INQUIRY message or *several such messages*" is that it is unknown at the onset of the INQUIRY phase how many INQUIRY messages will have to be sent before at least one suitable unit to form an ad hoc network is found and, thus, how long it will take to complete the INQUIRY phase.

Further support for the proposition that a Bluetooth INQUIRY phase is of indefinite duration is provided, for example, in the Web publication presently hosted at <http://www.anotherurl.com/library/bluetooth_research.htm>, which states:

A unit that wants to discover other Bluetooth units enters an inquiry substate. In this substate, it continuously transmits the inquiry message ... at different hop frequencies A unit that allows itself to be discovered, regularly enters the inquiry scan substate to respond to inquiry messages.

The inquiry response is optional: a unit is not forced to respond to an inquiry message.

Once again, the clear indication is that INQUIRY messages are transmitted for an indefinite duration until at least one suitable unit to form an ad hoc network is found.

In summary, the INQUIRY phase discussed in Rune and relied on by the Examiner as providing a suggestion to modify the teachings of Rune to make the claimed invention in fact teaches away from the invention as recited in independent claims 17, 27 and 32 since the INQUIRY phase in Rune is of *indefinite* duration whereas the independent claims recite phases of *predetermined* duration and *phase time limits* that enforce phase transitions. Rune does not disclose, teach or suggest what is recited in amended claims 17 and 27 for at least the reason that there is no suggestion in Rune to conduct a discovery phase of predetermined duration immediately after a listening phase and, and then to conduct an election phase of predetermined duration immediately after the discovery phase, both of which are recited in these claims. On the contrary, Rune indicates that transitions between phases are triggered by receipt of certain message types rather than predetermined phase timeouts. That is, phase transitions in Rune are indicated to be message-driven rather than time-dependent. Moreover, Rune fails to disclose, teach or suggest what is recited in claim 32 for at least the reason that Rune does not suggest phase timers that enforce phase time limits and phase transitions.

Since the independent claims are allowable, the dependent claims are allowable.

In view of the foregoing, consideration and favorable action on all claims are respectfully requested. Accordingly, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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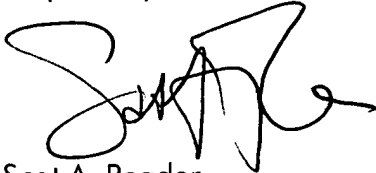
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Response Dated December 2, 2008
Reply to Office Action mailed September 29, 2008

Should any question remain in view of this communication, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'SAR', written over a horizontal line.

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